

Notice of Allowability

Application No.

09/367,081

Examiner

Hai Vo

Applicant(s)

PENNEAU ET AL.

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/14/2005.
2. ☒ The allowed claim(s) is/are 1,5,7-9,30,36,40-44,46,48,49,112 and 115.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>0225</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

HL

Terminal Disclaimer

1. The terminal disclaimer filed on 02/14/2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of co-pending Application 10/390,422 has been reviewed and is accepted. The terminal disclaimer has been recorded.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eric S. Hyman on 02/24/2005.

The application has been amended as follows:

The claims:

Rewrite claim 1:

A porous composite product with a homogeneous structure having a property that renders its self-supportive, the product being provided in the form of a film, exhibiting a "BET" specific surface greater than 10 m²/g and being formed of at least 20% by weight of at least one filler with the balance of the product being a non-fibrillated polymeric material, the said product being obtained by extrusion and having an open porous structure, wherein the at least one filler

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exhibits a specific surface greater than $1000 \text{ m}^2/\text{g}$ and the mean diameter of a plurality of pores of the porous composite product is less than $0.5 \text{ }\mu\text{m}$,

wherein the polymeric material comprises elastomers or polymers selected from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, and vinyl polymers,

wherein the polymeric material also comprises thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process, the thermoplastic elastomers selected from the group consisting of polyethers, poly(vinyl alcohol)s and ethylene-vinyl alcohol copolymers, and

wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process include polyethers with a molecular mass of between 200,000 and 1,000,000.

Rewrite claim 30:

A porous composite product with a homogeneous structure having a property that renders itself supportive, the product being provided in the form of a film, the product exhibiting a specific surface greater than $10 \text{ m}^2/\text{g}$ and comprising between 30% and 85% by weight of at least one filler with the balance of the product being a non-fibrillated polymeric material, the product being obtained by extrusion and having an open porous structure, wherein the at least one filler exhibits a specific surface greater than $1000 \text{ m}^2/\text{g}$ and the mean diameter of a plurality of pores of the porous composite product is less than $0.5 \text{ }\mu\text{m}$,

wherein the polymeric material comprises elastomers or polymers selected from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, and vinyl polymers,

wherein the polymeric material also comprises thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process, the thermoplastic elastomers selected from the group of consisting of polyethers, poly(vinyl alcohol)s and ethylene-vinyl alcohol copolymers, and

wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process include polyethers with a molecular mass of between 200,000 and 1,000,000.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance: Note that the claim objections are considered moot in view of the claim cancellation. The double patenting rejections are withdrawn in view of the terminal disclaimer filed on 02/14/2005. Examiner's amendment is sufficient to place the instant claims in condition for allowance. The inclusion of the product formed of at least 20% by weight of at least one filler with the balance of the product being a non-fibrillated polymeric material renders the claims unobvious over the prior art. Bernstein et al (US 4,393,693) discloses that a porous composite product requires a fibrillated PTFE polymer to minimize the loss of the electrode active material and to provide the product with highly resistant to corrosive environments (column 3, lines 65-

66, and column 4, lines 1-5). Support for the negative limitation "non-fibrillated" is found at page 6, line 5 of the present specification.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo
Tech Center 17^{so}